REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated November 16, 2005. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1-15 are under consideration in this application. Claims 6 and 12 are being amended, as set forth in the above marked-up presentation of the claim amendments.

All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

Claim 6 and 12 were rejected under 35 U.S.C. § 103 as being unpatentable over Hartemann et al. (USP 4,515,016) in view of Tavkhelidze et al. (USP 6,720,704).

In addition, claim 7, 8, 13 and 14 were rejected under 35 U.S.C. § 103 as being unpatentable over Hartemann and Tavkhelidze et al., and further in view of Kasahara et al. (US Application No. 2001/0028203).

Further, claims 9, 10 and 11 were rejected under 35 U.S.C. § 103 as being unpatentable over Hartemann and Tavkhelidze et al., and further in view of what the Examiner describes as "ordinary skill in the art." Applicants have reviewed the above rejections and hereby respectfully traverse.

The present invention as now recited in claim 6 is directed to a vibrational power generation device vibrator comprising first and second electrodes constituting a first capacitance; a vibrator provided with the first electrodes; a vibrator pedestal for fixing the vibrator onto an electrode base; and an electrode terminal respectively connected to the first and second electrodes and performing an input and output of electric charges from the exterior. The vibrator includes a mass performing an undriven vibration and two oscillation plates for supporting the mass. The oscillation plates sandwich a first surface of the mass and a second surface opposite thereto in a mutually parallel manner such that the planes of the oscillation plates support the first and second surfaces of the mass. The vibrator is operated

through vibrational energy to change the capacitance by controlling a distance between the first and second electrodes and generate power.

The present invention as recited in claim 12 is directed to a vibrational power generation device vibrator comprising first and second electrodes constituting a first capacitance; a vibrator provided with the first electrodes; a vibrator pedestal for fixing the vibrator onto the electrode base; and an electrode terminal respectively connected to the first and second electrodes and performing an input and output of electric charges from the exterior. The vibrator includes n-1 masses performing undriven vibration and n oscillation plates for supporting the n-1 masses. The n oscillation plates sandwich first surfaces of the n-1 masses and second surfaces opposite thereto in a mutually parallel manner such that the planes of the n oscillation plates support the first and second surfaces of the n-1 masses. The vibrator is operated through vibrational energy to change the capacitance by controlling a distance between the first and second electrodes provided at the vibrator and generate power.

Among its main features, the present invention is directed to a vibrator (as shown in FIGs. 1 and 12, for example) that oscillates to change the capacitance (between FIGs. 1 and 6 and FIG. 7), whereby power generation is performed. Since the change in the capacitance is increased in order to increase the amount of power generation, the electrodes 6 and 7 are kept parallel at the time of oscillating and the oscillator is sandwiched between the oscillation plates 4 and 5 (paragraphs 0016 and 0039 in the published present application).

In contrast, Hartemann et al merely relate to the elastic surface wave accelerometer, wherein the bending stress is detected for detecting the elastic surface wave (col. 2, lines 9-30 and 46-49). Specifically, in order to detect the elastic surface wave, the detecting means (31 and 32 in FIG. 2) detects the bending stress (col. 2, lines 9-30 and 46-49). Since the accelerometer is one for measuring the bending, Hartemenn et al does not show or suggest performing power generation nor any configuration of an electrode and capacitance that are essential components for the present application. Further, since the object of Hartemann et al is bending measurement, there is no teaching or suggestion for forming any capacitance in the structure or operation of Hartemann et al.

Even more, in this reference, the vibrator 27 and the plates 6 and 10 are connected through the rollers 29 and 30 and the plates are merely "linearly" tangent to the rollers 29 and 30. Therefore, the plates can bend and thus this reference cannot and does not disclose any configuration, as recited in claims 6 and 12, wherein 'the plates 4 and 5 "planarly" support the mass' in order to make the vibrator oscillate in parallel.

Tavkhelidze et al (U.S. Patent No. 6,720,704) relate to an actuator, wherein the current from the electrodes 1 and 5 is fed back to the actuator through the capacitance controller 29 and the distance of the region between the plates 1 and 5 is controlled (see col. 8, lines 38 to 52). In Fig. 1, the controller 29 controls the field exerted on the actuator by controlling the distance between the electrodes 1 and 5. Thus, at the very least, Tavkhelidze et al fails to disclose or suggest any structure by which "oscillation plates sandwich and support a first surface of said mass and a second surface opposite thereto in a mutually parallel manner" as in the present invention.

Contrary to the Examiner's assertion that the actuator 20 is a vibrator, the actuator disclosed in Tavkheikidze et al is in fact a piezo element, but not a vibrator. Each of the plurality of actuators 20 is only a member expanding/contracting in proportion to the electric field but not oscillating, such that sandwiching and supporting the actuators by the oscillation plates are not required.

Therefore, in view of all the above, Applicants will contend that neither reference provides any disclosure, teaching or suggestion that would motivate their combination so as to embody each and every feature of the claimed invention. Consequently, Hartemann et al with Tavkhelidze et al does not teach or suggest the problem of the present invention, and does cannot render each and every feature of the present invention obvious to one skilled in the art.

As noted in the previous response, the Examiner cited Kasahara et al (U.S. Patent Application Publication No. 2001/0028203) as a secondary reference disclosing the contact prevention device described in the present claim 7 etc. However, Kasahara et al only relates to the electrostatic actuator, and thus does not disclose the stopper of the present invention. This secondary reference does not provide any teaching or suggestion to make up for the deficiencies in Hartemann et al and Tavkhelidze et al such that their combination can render the present invention obvious. Instead, the combination of all three references will still suffer from the same deficiencies described above with none of the features or advantages achieved by the present invention. The present invention as a whole is distinguishable and thereby allowable over the prior art.

Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention and the prior art references upon which the rejections in the Office Action

rely, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

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